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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Fourth Semester, B.E. - Information Science and Engineering

Semester End Examination; May/June - 2019

Software Engineering

Time: 3 hrs

Max. Marks: 100

Note: Answer FIVE full questions, selecting ONE full question from each unit.

UNIT - I

- 1 a. Define the following FAQ's : 4
 i) Software process ii) CASE iii) Software product iv) System Engineering
- b. List out and explain potential ethical responsibilities of software engineers. 6
- c. Describe water fall model with its merits and demerits. 10
- 2 a. Explain the complete structure of software requirement documents or SRS. 10
- b. What are the different stages in requirement elicitation and analysis process? Explain. 10

UNIT - II

- 3 a. Briefly explain the architectural design process. 10
- b. Write a note on; i) Modular decomposition ii) Object oriented design. 10
- 4 a. Design a Data Flow Diagram (DFD) for order processing system. 10
- b. Compare interface design principles and user interaction. 10

UNIT - III

- 5 a. List out and explain the four principles of dimensions to dependability. 4
- b. What is meant by critical system? Explain its classifications. 6
- c. Briefly explain the different factors of reliability metrics. 10
- 6 a. Define Verification and Validation. 2
- b. Briefly explain the software inspection process. 8
- c. What is meant by clean-room software? Explain the clean-room software development process. 10

UNIT - IV

- 7 a. Mention and explain the different decisions factors governing staff selections. 10
- b. Discuss COCOMO model. 10
- 8 a. Describe people capability maturity model. 10
- b. Compare and explain Quality planning and Quality control. 10

UNIT - V

- 9 a. Briefly explain program evaluation process. 10
- b. List out and explain the different stages in reengineering process. 10
- 10 a. Briefly explain program modularization. 10
- b. Mention and explain the different phases in reverse engineering process. 10